

CLAIMS

1. A therapeutic device (1) intended for local and selective treatment of an obstruction in a natural lumen or passage (2) for circulation of a fluid, located in a filled area, in particular in a solid organ of the human or animal body, said lumen being obstructed by the effect of a local cell proliferation, wherein the device comprises:

10 - a non-biodegradable tubular element (3) which is designed to be placed and retained, in a self-stabilizing manner, in said natural lumen, this element being especially of cylindrical shape, and sufficiently flexible to conform to said natural lumen lying against its wall, but sufficiently rigid to maintain an artificial channel (4) in said lumen;

15 - a medicinal sleeve (7) which is supported by said tubular element (3) and which is positioned along the length of, and around, the latter, so as to come into line with, and into direct contact with, the obstruction once the natural lumen has been intubated with said tubular element, and comprising a therapeutic agent which is cytoreductive, in particular cytotoxic, specifically vis-à-vis the cells of said local cell proliferation, essentially through simple superficial and solid tissue contact with said cells, and designed to deliver said therapeutic agent at least in its outer surface portion.

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2. The therapeutic device as claimed in claim 1, wherein the medicinal sleeve (7) is incorporated in the tubular element (3).

3. The therapeutic device as claimed in claim 2, 35 wherein the tubular element (3) comprises a core (6) made of a biocompatible material, in particular a relatively smooth and soft material, for example silicone rubber, and in a biologically active zone (5)

of said tubular element corresponding to said medicinal sleeve (7) the material of the core (6) incorporates the cytoreductive therapeutic agent, at least on the surface.

5 4. The therapeutic device as claimed in claim 1,
wherein the medicinal sleeve (7) is distinct from the
tubular element (3) and covers the latter.

5. The therapeutic device as claimed in claim 4,
wherein, on the one hand, the tubular element (3)
10 comprises an internal core (6) made of a biocompatible
material, in particular a relatively smooth and soft
material, for example silicone rubber, and, on the
other hand, the medicinal sleeve (7) arranged outside
the core (6) comprises a biologically compatible
15 substrate incorporating the cytoreductive therapeutic
agent.

6. The therapeutic device as claimed in claim 5, wherein the substrate of the medicinal sleeve (7) is radially expandable, especially such that the outer surface of said sleeve can be inscribed in particular, in the non-expanded position, within the remainder of the outer surface of the tubular element (3), and, in the expanded position, can emerge from the outer surface of the same tubular element.

25 7. The therapeutic device as claimed in claim 6,
wherein the substrate of the medicinal sleeve (7) is
hydrophilic and expandable under the effect of the
biological fluids present or circulating in the
obstructed natural lumen.

30 8. The therapeutic device as claimed in claim 6, which comprises a sheath (8) made of a synthetic foam, ensuring the connection between the medicinal sleeve (7) and the core (6) of the tubular element (3).

9. The therapeutic device as claimed in claim 5,
35 wherein the medicinal sleeve (7) comprises a plurality
of radial channels (9) running from the outside toward
the inside of said medicinal sleeve.

10. The therapeutic device as claimed in claim 5, which comprises an expandable connection sleeve (10)

interposed between the core (6) of the tubular element (3) and the medicinal sleeve (7).

11. The therapeutic device as claimed in claim 1, which comprises a protective surface envelope (11) for the medicinal sleeve (7), which envelope is biodegradable through tissue contact in situ with the obstructed part of the natural lumen or passage.

10 12. The therapeutic device as claimed in claim 1, wherein a withdrawal thread (12) is secured to the downstream end (with respect to the direction of implantation) of the tubular element (3).

15 13. The device as claimed in claim 1, wherein the medicinal sleeve (7) comprises a bacteriostatic agent and, if appropriate, an agent which is opaque vis-à-vis X-rays.

20 14. The therapeutic device as claimed in claim 1, wherein the cytoreductive agent is chosen from among antimitotic agents, cytolytic agents, enzymes, hormones, antienzymes and metal salts.

25 15. The therapeutic device as claimed in claim 5, wherein the medicinal sleeve (7) and the internal core (6) are off-centered in relation to one another.

30 16. The intraurethral therapeutic device as claimed in any one of claims 1 to 15, intended for the therapeutic treatment of the prostatic portion (21) of the male urethra, wherein the medicinal sleeve (7) is positioned, in relation to the tubular element (3), from a so-called lower end, situated above the bottom end (3a) of said tubular element (3), for example at approximately 10 mm from said bottom end, to a so-called upper end, situated set back from the top end (3b) of said tubular element, for example at a distance of between 10 and 15 mm from said top end.

35 17. The therapeutic device as claimed in claim 16, wherein the top end (3b) of the tubular element is blind, and is perforated (13) in order to ensure the passage of the urine from the bladder.

18. The intraurethral therapeutic device as claimed in claim 16, which comprises two tubular elements (3,

14) which are intended to be arranged in the urethra (2) on either side, respectively, of the sphincter (15) and are attached to one another by a flexible and deformable connection means (16) which is intended to

5 be held in the orifice of the sphincter, and the upper tubular element (3) supports the medicinal sleeve (7) in the prostatic portion (21) of the urethra, and the other, lower, tubular element (14) does not comprise a medicinal sleeve.

10 19. The intraurethral therapeutic device as claimed in claim 18, wherein the lower element (14) comprises a core (6) made of a biocompatible but non-biodegradable material, in particular a relatively smooth and soft material, for example silicone rubber.

15 20. The therapeutic device as claimed in claim 18, wherein the lower element (14) comprises a radially expandable outer sleeve (17), especially such that the outer surface of said outer sleeve can be inscribed, in the non-expanded position, within the remainder of the

20 outer surface of the lower element (14), and, in the expanded position, can emerge from the outer surface of the same lower element.

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